Generative AI and ChatGPT in School Children's Education: Evidence from a School Lesson

Abstract

In 2023, the global use of generative AI, particularly ChatGPT-3.5 and -4, witnessed a significant surge, sparking discussions on its sustainable implementation across various domains, including education from primary schools to universities. However, practical testing and evaluation in school education are still relatively unexplored. This article examines the utilization of generative AI in primary school education. The study involved 110 pupils, aged 8–14 years old, studying in the 4th–6th grades across four classes in two schools. Using laptops, pupils participated in test lessons where content, text, figures, and exercises were generated and modified using generative AI, specifically ChatGPT-3.5. The results demonstrated that it was possible to use ChatGPT-3.5, as one example of generative AI, to personify learning material so that it would meet the knowledge and learning skills of pupils with different levels of knowledge. A clear majority of pupils enjoyed learning the generative AI-modified material. There is a promising potential of generative AI use in school education, supporting pupils' motivated learning and skills development. However, these tools need to be developed, refined and optimized to ensure proper adaptation and to create impactful, inclusive, and sustainable learning in schools to benefit pupils, teachers and education managers alike.